

REMARKS/ARGUMENTS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office Action, and amended as necessary to more clearly and particularly describe the subject matter that Applicant regards as the invention. Review of the subject application in view of the present remarks is respectfully requested.

By the present amendment, claims 1 and 5 have been amended and new claim 6 has been added. No new matter is believed entered. As such, it is now respectfully submitted that each of the claims is in condition for allowance.

Claims 1-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Taylor (U.S. Patent No. 6,709,397), hereinafter “Taylor”, in view of Morley et al. (U.S. Patent No. 6,840,938), hereinafter “Morley”, in further view of Blumenthal (U.S. Patent No. 5,048,529), hereinafter “Blumenthal”. Applicant respectfully traverses this rejection at least for the following reasons.

Amended claim 1 recites, “a sliding mechanism for supporting said middle pulley in such a manner that said middle pulley is slidable in a direction toward and away from said first pulley to protect looseness of the wire, and said middle pulley is not movable in a longitudinal direction of said longitudinal insertion portion.” None of the cited references, either alone or in combination, describe such structure.

The Examiner concedes on page 4 of the Office Action that neither Taylor nor Morley expressly teach the use of a sliding mechanism for sliding the middle pulley. Thus, the Examiner relies on Blumenthal to teach the structure of claim 1.

The Examiner alleges that Blumenthal teaches the use of a sliding mechanism to slide the pulleys to change the angle of the transducer, allegedly element 34 in FIG. 1. As shown in FIG. 1, the second slidable idler pulley 34 is fixed to slide 31 and combines with a second fixed position idler pulley 36 to form the second loop 24. “The belt and pulley arrangement of FIG. 1 shows all of the idler pulleys almost aligned in a straight line.” See Col. 3, lines 10-11. It is apparent from FIG. 1 that the second fixed position idler pulley 36 rotates and slides in a longitudinal direction along the length of the insert probe to cause the continuous belt 37 to move. Thus, the alleged sliding mechanism, second slidable idler pulley 34, is slidable in a longitudinal direction along the insert probe.

Therefore, Blumenthal does not describe all of the structure of claim 1 as is required to support a rejection under 35 U.S.C. § 103(a). Specifically, Blumenthal does not teach a “sliding mechanism for supporting said middle pulley in such a manner that said middle pulley is slidable in a direction of coming close to and going back away from said first pulley to protect looseness of the wire, and said middle pulley is not movable in a longitudinal direction of said longitudinal insertion portion,” as described in claim 1. Accordingly, claim 1 is now in condition for allowance. Applicant respectfully requests withdrawal of the corresponding rejection of claim 1.

Claims 2-4 depend from independent claim 1 that is believed to be in condition for allowance as set forth above. Accordingly, Applicant respectfully requests withdrawal of the corresponding rejection of claims 2-4 as depending directly or indirectly from allowable claim 1.

In addition, claim 2 recites, “a slider portion to which said middle pulley is attached and which can be slid in a direction orthogonal to a rotation direction of said first pulley along a slider guide portion formed at said tip portion.” None of the cited references, either alone or in combination, describe such structure.

As stated above, the Examiner concedes on page 4 of the Office Action that neither Taylor nor Morley expressly teach the use of a sliding mechanism for sliding the middle pulley. Thus, the Examiner relies on Blumenthal to teach the structure of claim 2.

The Examiner alleges that Blumenthal teaches the use of a sliding mechanism, allegedly element 34, to slide the pulleys to change the angle of the transducer. As stated above, FIG. 1 of Blumenthal shows a second slidable idler pulley 34 fixed to slide 31 to form a second loop 24. However, second loop 24 is arranged linearly with a first loop 23 in the probe. Thus, the second slidable idler pulley 34 is slidable along the axis of the probe and along the direction of the pulleys. Therefore, the second slidable idler pulley 34, the alleged sliding mechanism, cannot be slid in a direction orthogonal to the rotation direction of the first pulley. Instead, the pulleys in Blumenthal are all slidable in the same direction along the probe axis. Consequently, Blumenthal does not describe all of the structure of claim 2 as is required to support a rejection under 35 U.S.C. § 103(a). Accordingly, claim 2 is now in condition for allowance. Applicant respectfully requests withdrawal of the corresponding rejection of claim 2.

Claim 5 recites, “a sliding mechanism for sliding said middle pulley without moving said middle pulley in a longitudinal direction of said insertion portion so that said wire is not loosened.” The Examiner conceded on page 4 of the Office Action that neither Taylor nor Morley expressly teach the use of a sliding mechanism for sliding the middle pulley. For at least the same reasons asserted for claim 1, Applicant argues that Blumenthal teaches a second slidable idler pulley 34, the alleged sliding mechanism, being slidable in a longitudinal direction along the insertion probe.

Therefore, Blumenthal does not describe all of the structure of claim 5 as is required to support a rejection under 35 U.S.C. § 103(a). Accordingly, claim 5 is now in condition for allowance. Applicant respectfully requests withdrawal of the corresponding rejection of claim 5.

New claim 6 recites, “a sliding mechanism for sliding said middle pulley without moving said middle pulley in a longitudinal direction of said insertion portion to adjust tension of said wire.” None of the cited references teach such a structure. Blumenthal is cited for the sliding mechanism. The sliding “idler pulleys” of Blumenthal however, do not adjust tension. On the contrary, they are used to change the phase relationship between the drive pulley and the driven pulley. Col. 2, ln. 35-39. Blumenthal’s idler pulleys are moved in an inverse relationship. Col. 2, ln. 39-44. Thus, moving the pulleys has no effect on the tension of the belt. Therefore, the sliding mechanism does not adjust tension of the wire as claimed. Additionally, as argued above, the sliding “idler pulleys” of Blumenthal are slidable in a longitudinal direction along the insertion probe, as is clearly shown in FIG. 1.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

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If there are any additional fees resulting from this communication, please charge same to our Deposit Account No.: 16-0820, our Order No.: NIHE-38852.

Respectfully submitted,
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